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特許協力条約に基づいて公開された国際出願

<p>(51) 国際特許分類6 A01K 67/027</p>	<p>A1</p>	<p>(11) 国際公開番号 WO98/37757</p> <p>(43) 国際公開日 1998年9月3日(03.09.98)</p>
<p>(21) 国際出願番号 PCT/JP98/00860</p> <p>(22) 国際出願日 1998年3月2日(02.03.98)</p> <p>(30) 優先権データ 特願平9/62309 1997年2月28日(28.02.97) JP</p> <p>(71) 出願人 (米国を除くすべての指定国について) 麒麟麦酒株式会社(KIRIN BEER KABUSHIKI KAISHA)[JP/JP] 〒104-8288 東京都中央区新川二丁目10番1号 Tokyo, (JP)</p> <p>(72) 発明者; および (75) 発明者/出願人 (米国についてのみ) 富塚一磨(TOMIZUKA, Kazuma)[JP/JP] 吉田 均(YOSHIDA, Hitoshi)[JP/JP] 石田 功(ISHIDA, Isao)[JP/JP] 〒236-0004 神奈川県横浜市金沢区福浦1-13-5 麒麟麦酒株式会社 基盤技術研究所内 Kanagawa, (JP) 花岡和則(HANAOKA, Kazunori)[JP/JP] 〒228-8555 神奈川県相模原市北里1-15-1 北里大学 理学部 生物科学科内 Kanagawa, (JP) 押村光雄(OSHIMURA, Mitsuo)[JP/JP] 〒683-8503 鳥取県米子市西町86 鳥取大学 医学部 生命科学科内 Tottori, (JP)</p>		<p>(74) 代理人 弁理士 平木祐輔, 外(HIRAKI, Yusuke et al.) 〒105-0001 東京都港区虎ノ門一丁目17番1号 虎ノ門5森ビル3F Tokyo, (JP)</p> <p>(81) 指定国 AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO特許 (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧州特許 (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI特許 (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>添付公開書類 国際調査報告書</p>
<p>(54)Title: PLURIPOTENT CELLS HAVING DISRUPTED INTRINSIC GENES</p> <p>(54)発明の名称 内因性遺伝子が破壊されている分化多能性保持細胞</p> <p>(57) Abstract A process for constructing a chimeric non-human animal characterized by preparing microcells containing one or more foreign chromosomes or fragments thereof, and transferring the one or more foreign chromosomes or fragments thereof into pluripotent cells through fusion with the microcells; chimeric non-human animals which can be constructed by the above process and offspring thereof; tissues and cells originating in the above animals; methods for using the individuals, tissues and cells of the animals; pluripotent cells containing one or more foreign chromosomes or fragments thereof, a process for constructing these cells, and the use of these cells; pluripotent cells in which at least two intrinsic genes have been disrupted; a process for constructing the above cells by homologous recombination; etc.</p>		

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP98/00860

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl.⁶ A01K67/027

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁶ A01K67/027

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

JICST File on Science and Technology

BIOSIS PREVIEWS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	Nature Genetics, 16[2] (1997) p.133-143 Full text	1-40, 42, 43, 45-53
P, Y	Full text	41, 44, 54-76
Y	JP, 05-328878, A (The Institute of Physical and Chemical Research), December 14, 1993 (14. 12. 93), Full text (Family: none)	1-76
Y	JP, 07-067629, A (K.K. Dinado), March 14, 1995 (14. 03. 95), Full text (Family: none)	1-76
Y	EMBO Journal, 2 (1983) p.1963-1968 Full text	1-76
Y	Proc. Natl. Acad. Sci. USA, 74 (1997) p.319-323 Full text	1-76

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
May 21, 1998 (21. 05. 98)Date of mailing of the international search report
June 2, 1998 (02. 06. 98)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP98/00860

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	WO, 89/05308, A1 (GESELLSCHAFT FUR BIOTECHNOLOGISCHE FORSCHUNG MBH), June 15, 1989 (15. 06. 89), Full text Full text & JP, 02-502426, A	41, 44, 54, 55 1-40, 42, 43, 45-53, 56-63

国際調査報告

国際出願番号 PCT/J P 98/00860

A. 発明の属する分野の分類 (国際特許分類 (IPC))

Int. Cl.⁸ A01K67/027

B. 調査を行った分野

調査を行った最小限資料 (国際特許分類 (IPC))

Int. Cl.⁸ A01K67/027

最小限資料以外の資料で調査を行った分野に含まれるもの

国際調査で使用了電子データベース (データベースの名称、調査に使用した用語)

JICST 科学技術文献ファイル
BIOSIS PREVIEWS

C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
P, X	Nature Genetics, 16[2] (1997) p. 133-143 全文	1-40, 42, 43, 45-53
P, Y	全文	41, 44, 54-76
Y	J P, 05-328878, A (理化学研究所) 14. 12月. 1993 (14. 12. 93) 全文 (ファミリーなし)	1-76

☒ C欄の続きにも文献が列挙されている。☐ パテントファミリーに関する別紙を参照。

* 引用文献のカテゴリー

- 「A」 特に関連のある文献ではなく、一般的技術水準を示すもの
「E」 先行文献ではあるが、国際出願日以後に公表されたもの
「L」 優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す)
「O」 口頭による開示、使用、展示等に言及する文献
「P」 国際出願日前で、かつ優先権の主張の基礎となる出願

の日の後に公表された文献

- 「T」 国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの
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「Y」 特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの
「&」 同一パテントファミリー文献

国際調査を完了した日

21. 05. 98

国際調査報告の発送日

02.06.98

国際調査機関の名称及びあて先

日本国特許庁 (ISA/J P)
郵便番号 100-8915
東京都千代田区霞が関三丁目4番3号

特許庁審査官 (権限のある職員)

関根 裕

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電話番号 03-3581-1101 内線 3238

C (続き) . 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
Y	JP, 07-067629, A (株式会社ディナード) 14. 3月. 1995 (14. 03. 95) 全文 (ファミリーなし)	1-76
Y	EMBO Journal, 2 (1983) p.1963-1968 全文	1-76
Y	Proc. Natl. Acad. Sci. USA, 74 (1977) p.319-323 全文	1-76
Y A	WO, 89/05308, A1 (GESELLSCHAFT FUR BIOTECHNOLOGISCHE FORSCHUNG MBH) 15. 6月. 1989 (15. 06. 89) 全文 全文 & JP, 02-502426, A	41, 44, 54, 55 1-40, 42, 43, 45-53, 56-63

Derwent abstract of WO 98/37757

3/9/1

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012063910 **Image available**

WPI Acc No: 1998-480821/199841

XRAM Acc No: C98-145439

XRPX Acc No: N98-375183

Pluripotent cells containing foreign chromosomes or fragments - and
non-human chimeric animals constructed using them and expressing foreign
genes such as human antibiotic genes

Patent Assignee: KIRIN BEER KK (KIRI)

Inventor: HANAOKA K; ISHIDA I; OSHIMURA M; TOMIZUKA K; YOSHIDA H

Number of Countries: 081 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9837757	A1	19980903	WO 98JP860	A	19980302	199841 B
AU 9861189	A	19980918	AU 9861189	A	19980302	199908
EP 972445	A1	20000119	EP 98905731	A	19980302	200009
			WO 98JP860	A	19980302	
JP 10537525	X	20000725	JP 98537525	A	19980302	200041
			WO 98JP860	A	19980302	

Priority Applications (No Type Date): JP 9762309 A 19970228

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9837757 A1 J 217 A01K-067/027

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KR KZ LC LK LR LS
LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
TT UA UG US UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE
IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9861189 A A01K-067/027 Based on patent WO 9837757

EP 972445 A1 E A01K-067/027 Based on patent WO 9837757

Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE

JP 10537525 X A01K-067/027 Based on patent WO 9837757

Abstract (Basic): WO 9837757 A

Pluripotent cells containing foreign chromosomes or their fragments
(preferably at least 670 kb in length, especially more than 1000 kb)
are obtained by preparing cancerous cells containing the foreign
chromosomes or fragments, then fusing these with pluripotent cells such
as embryonic stem cells, embryonic reproductive cells, embryonic cancer
cells or their mutants.

Also claimed are: (1) a method of obtaining hybridoma cells by
fusing a cell with a high ability to produce hybridoma cells (such as
mouse A9 cells) with a cell containing the foreign chromosomes or
fragments (such as normal human diploid cells); (2) a method of
utilising pluripotent cells to produce chimeric and transgenic
non-human animals (especially mammals such as mice) which can express

the foreign chromosomes or fragments introduced; and (3) chimeric animals, their offspring and tissues and cells derived from the offspring produced by a method as in (2).

USE - The inventions can be used for the production of monoclonal antibodies for medical use which are of human type and therefore not antigenic in humans. They can also be used in the production of chimeric and transgenic animals which express useful foreign proteins, or which can serve as models for the study of human diseases.

Dwg.10/45

Title Terms: CELL; CONTAIN; FOREIGN; CHROMOSOME; FRAGMENT; NON; HUMAN;
CHIMERIC; ANIMAL; CONSTRUCTION; EXPRESS; FOREIGN; GENE; HUMAN; ANTIBIOTIC
; GENE

Derwent Class: B04; D16; P14

International Patent Class (Main): A01K-067/027

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): B04-F01; B04-G21; D05-H11A1; D05-H15; D05-H16A

Chemical Fragment Codes (M1):

01 M423 M710 M903 N135 Q233 V600 V645 V753 V754

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